

COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Valley Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Neuman Aluminium Impact Extrusion, Inc.
Waynesboro, Augusta County, Virginia
Permit No. VRO81346

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Neuman Aluminium Impact Extrusion, Inc. has applied for renewal of its Title V Operating Permit for its aluminum can manufacturing facility in Waynesboro, Virginia. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact:_____

Date: 12/5/05

Air Permit Manager:_____

Date: 12/5/05

Deputy Regional Director:_____

Date: 12/5/05

FACILITY INFORMATION

Permittee

Neuman Aluminium Impact Extrusion, Inc.
1418 Genicom Drive
Waynesboro, Virginia 22980

Facility

Neuman Aluminium Impact Extrusion, Inc.
1418 Genicom Drive
Waynesboro, Virginia 22980

County-Plant Identification Number: 51-820-0137

SOURCE DESCRIPTION

NAICS 332431 - Metal Cans Manufacturing

Neuman Aluminium Impact Extrusion, Inc. (Neuman) is involved in the manufacturing of aluminum cans. The process involves tumbling aluminum slugs, impact extruding the slugs into cans, cleaning the cans in degreasers, and then packaging the cans for shipping. The only emissions come from the degreasing operations where trichloroethylene (TCE), a volatile organic compound (VOC), is utilized to clean the cans.

The facility is a Title V major source of trichloroethylene. This source is located in an attainment area for all pollutants and is not a PSD major source. The facility was previously permitted under a minor new source review (NSR) permit issued on December 11, 2000.

CHANGES TO INITIAL TITLE V PERMIT

The following are changes to the initial Title V issued on January 8, 2001:

- Change the name of the permittee and facility (Section I).
- Change the name and title of the facility's responsible official (Section I).
- Change the name and title of the facility's contact person (Section I).
- Include six additional insignificant emission units (Section IV).
- Update the general conditions to reflect current boilerplate language (Section VI).

Neuman indicated the permittee name and facility name have been changed from Neuman Aluminum USA to Neuman Aluminium Impact Extrusion, Inc. Also, the name and title of the facility's responsible official and contact person have changed. As a result, the name and title of the facility's responsible official and contact person and all references to the facility name and permittee name have been changed in the Title V permit accordingly.

Six emission units, one natural gas-fired drop-bottom heat treat furnace, two natural gas-fired age ovens, two natural gas-fired water heaters and one propane-fired water heater, were added to the insignificant emission units table. The natural gas-fired units are insignificant based on the size (rated capacity) of each unit and the propane-fired unit is insignificant based on emission levels.

COMPLIANCE STATUS

The facility is inspected once every two years. The most recent inspection was conducted on July 28, 2004, and the facility was found to be operating in compliance with all applicable requirements.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

Table I. Significant Emission Units

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Degreasing Equipment							
1	1	36" x 96" Detrex In-line Vapor Degreaser	3600 parts/hr	Freeboard Refrigeration Device	1	TCE VOC	12/11/2000
				Freeboard Ratio of 1.0	-		
				Reduced Room Draft	-		
2	1	36" x 96" Detrex In-line Vapor Degreaser	3600 parts/hr	Freeboard Refrigeration Device	2	TCE VOC	12/11/2000
				Freeboard Ratio of 1.0	-		
				Reduced Room Draft	-		
3	1	24" x 72" Detrex In-line Vapor Degreaser	3600 parts/hr	Freeboard Refrigeration Device	3	TCE VOC	12/11/2000
				Freeboard Ratio of 1.0	-		
				Reduced Room Draft	-		
4	1	24" x 72" Detrex In-line Vapor Degreaser	4000 parts/hr	Freeboard Refrigeration Device	4	TCE VOC	12/11/2000
				Freeboard Ratio of 1.0	-		
				Reduced Room Draft	-		
7	1	24" x 42" Detrex In-line Vapor Degreaser	4000 parts/hr	Freeboard Refrigeration Device	7	TCE VOC	12/11/2000
				Freeboard Ratio of 1.0	-		
				Reduced Room Draft	-		
8	1	27" x 44" Detrex In-line Vapor Degreaser	4000 parts/hr	Freeboard Refrigeration Device	8	TCE VOC	12/11/2000
				Freeboard Ratio of 1.0	-		
				Reduced Room Draft	-		

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
10	1	40.25" x 50" Batch (Bulk) Branson Vapor Degreaser	34,000 parts/hr	Freeboard Refrigeration Device	10	TCE VOC	12/11/2000
				Freeboard Ratio of 1.0	-		
				Reduced Room Draft	-		

*The Size/Rated capacity is provided for informational purposes only and is not an applicable requirement.

Six of the vapor degreasers are considered in-line (Units 1, 2, 3, 4, 7, and 8). All of these units were installed prior to November 29, 1993, and are considered “existing” as defined in 40 CFR Part 63, Subpart T (National Emission Standards for Halogenated Solvent Cleaning).

The bulk vapor degreaser (Unit 10) is a batch unit. The bulk degreaser was installed after November 29, 1993, and is considered “new” as defined in 40 CFR Part 63, Subpart T (National Emission Standards for Halogenated Solvent Cleaning). The solvent/air interface area of the bulk degreaser is considered to be greater than 13 ft² and the unit will have to meet the requirements for bulk units with a solvent/air interface greater than 13 ft².

EMISSIONS INVENTORY

A copy of the 2004 annual emission update is attached as Attachment A. Emissions are summarized in the following tables.

Table II. 2004 Actual Criteria Pollutant Emissions

Emission Unit	Criteria Pollutant Emissions (tons/year)				
	VOC	CO	SO ₂	PM-10	NO _x
Degreasing Equipment	52.7	0.0	0.0	0.0	0.0
Total	52.7	0.0	0.0	0.0	0.0

Table III. 2004 Actual Hazardous Air Pollutant Emissions

Pollutant	Hazardous Air Pollutant Emissions (tons/year)
Trichloroethylene (CAS # 79-01-6)	52.7

EMISSION UNIT APPLICABLE REQUIREMENTS

Degreasing Equipment Requirements

The degreasing equipment is currently operating under a minor NSR permit dated December 11, 2000. A copy of the permit is included in Attachment B.

Limitations

The following limitations are state BACT requirements from the minor NSR permit dated December 11, 2000 and are derived from 40 CFR Part 63, Subpart T (National Emission Standards for Halogenated Solvent Cleaning). Condition numbers refer to those contained in the NSR permit. Please note that 40 CFR Part 63, Subpart T, will be referenced hereafter as the Halogenated Solvent MACT.

- Condition 3: Air disturbances across each vapor degreaser shall be controlled by incorporating a reduced room draft. The permittee shall achieve a reduced room draft by:
- Ensuring that the flow or movement of air across the top of the freeboard area of each vapor degreaser or within each vapor

degreaser enclosure does not exceed 15.2 meters per minute (50 feet per minute) at any time, as measured using the procedures in Conditions 16 and 17.

- b. Establishing and maintaining the operating conditions under which the wind speed was demonstrated to be 15.2 meters per minute (50 feet per minute) or less.

- Condition 4: Each vapor degreaser shall have a freeboard ratio of 1.0.
- Condition 5: Each vapor degreaser shall have an automated parts handling system capable of moving parts or parts baskets at a speed of 3.4 meters per minute (11 feet per minute) or less from the initial loading of parts through removal of cleaned parts.
- Condition 6: Each vapor degreaser shall be equipped with a device that shuts off the sump heat if the sump liquid solvent level drops to the sump heater coils.
- Condition 7: Each vapor degreaser shall be equipped with a vapor level control device that shuts off sump heat if the vapor level in the vapor degreaser rises above the height of the primary condenser.
- Condition 8: Each vapor degreaser shall have a primary condenser.
- Condition 9: Each vapor degreaser shall be equipped with a freeboard refrigeration device. The permittee shall ensure that the chilled air blanket temperature (in °F), measured at the center of the air blanket, is no greater than 30% of the solvent's boiling point.
- Condition 10: The permittee shall meet all of the following work and operational practices:
- a. Control air disturbances across the vapor degreaser openings by incorporating a reduced room draft as described in Condition 3.
 - b. The parts baskets or the parts being cleaned in an open-top batch vapor cleaning machine shall not occupy more than 50 percent of the solvent/air interface area unless the parts baskets or parts are introduced at a speed of 0.9 meters per minute (3 feet per minute) or less.

- c. Any spraying operations shall be done within the vapor zone or within a section of the solvent cleaning machine that is not directly exposed to the ambient air (i.e., a baffled or enclosed area of the solvent cleaning machine).
- d. Parts shall be oriented so that the solvent drains from them freely. Parts having cavities or blind holes shall be tipped or rotated before being removed from any vapor degreaser unless an equally effective approach has been approved by the DEQ.
- e. Parts baskets or parts shall not be removed from any vapor degreaser until dripping has stopped.
- f. During startup of each vapor degreaser, the primary condenser shall be turned on before the sump heater.
- g. During shutdown of each vapor degreaser, the sump heater shall be turned off and the solvent layer allowed to collapse before the primary condenser is turned off.
- h. When solvent is added or drained from any vapor degreaser, the solvent shall be transferred using threaded or other leakproof couplings and the end of the pipe in the solvent sump shall be located beneath the liquid solvent surface.
- i. Each vapor degreaser and associated controls shall be maintained as recommended by the manufacturers of the equipment or using alternative maintenance practices that have been demonstrated, to the U.S. Environmental Protection Agency's (EPA's) satisfaction, to achieve the same or better results as those recommended by the manufacturer.
- j. Each operator of a vapor degreaser shall complete and pass the applicable sections of the test of solvent cleaning operating procedures in 40 CFR 63, Subpart T, Appendix A, if requested during an inspection by DEQ or EPA.
- k. Waste solvent, still bottoms, and sump bottoms shall be collected and stored in closed containers. The closed containers may contain a device that would allow pressure relief but would not allow liquid solvent to drain from the container.
- l. Sponges, fabric, wood, and paper products shall not be cleaned.

- Condition 11: An exceedance has occurred if:
- a. The operating conditions established under Condition 3.b. are not met.
 - b. The chilled air blanket temperature required in Condition 9 has not been met and was not corrected within 15 calendar days of detection. Adjustments or repairs shall be made to the vapor degreaser or control device to reestablish required levels. The parameter must be remeasured immediately upon adjustment or repair and demonstrated to be within required limits.
 - c. The wind speed required in Condition 3.a. has not been met and was not corrected within 15 calendar days of detection. Adjustments or repairs shall be made to the vapor degreaser or control device to reestablish required levels. The parameter must be remeasured immediately upon adjustment or repair and demonstrated to be within required limits.

Condition 13: Emissions from the operation of the aluminum can manufacturing plant shall not exceed the limits specified below:

Volatile Organic Compounds (VOC)	99.0 tons/yr
Trichloroethylene (CAS No. 79-01-6)	99.0 tons/yr

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.

The following limitation is an applicable requirement from the minor NSR permit dated December 11, 2000:

- Condition 26: Requirements necessary to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment and process equipment which affect such emissions.

The following Virginia Administrative Code that has a specific emission requirement has been determined to be applicable:

9 VAC 5-50-80, New Source Standard for Visible Emissions

The following condition in the Title V permit was established pursuant to this Code:

Condition III.A.10: Visible emissions from each vapor degreaser shall not exceed twenty percent (20%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed thirty percent (30%) opacity.

Compliance Assurance Monitoring (CAM)

All applicable monitoring requirements from the Halogenated Solvent MACT for each vapor degreaser have been included in the Title V permit. As per 40 CFR Part 64, Compliance Assurance Monitoring (CAM), emission limitations or standards proposed after November 15, 1990 pursuant to section 111 or 112 of the Clean Air Act are exempt from CAM (40 CFR §64.2(b)(1)(i)). Since the Halogenated Solvent MACT was proposed on November 29, 1993 and its standards implement section 112 of the Clean Air Act, each vapor degreaser is exempt from CAM requirements and no additional monitoring has been included in the permit.

Monitoring

The monitoring requirements in Conditions 14, 15, 16 and 17 of the minor NSR permit dated December 11, 2000 meet the requirements of the Halogenated Solvent MACT and have been included in the Title V permit. Because the Halogenated Solvent MACT monitoring requirements are met, the monitoring meets 40 CFR Part 70 requirements.

The permit requires the permittee to measure once per week the temperature at the center of the air blanket of each degreaser during the idling mode using a thermometer or thermocouple.

The permit also contains a requirement for the permittee to monitor the automated parts handling system speed as follows:

- The permittee shall determine the automated parts handling system speed by measuring the time it takes for the automated parts handling system to travel a measured distance. The speed is equal to the distance in meters (feet) divided by the time in minutes (meters per minute or feet per minute). The monitoring shall be conducted monthly. If after a year of monthly monitoring no exceedances of the automated parts handling system speed are measured, the permittee may begin monitoring the automated parts handling system speed quarterly. If an exceedance of the automated parts handling system speed occurs during quarterly monitoring, the monitoring frequency returns to monthly until another year of compliance without an exceedance is demonstrated.

The permit contains monitoring procedures to ensure a reduced room draft as follows:

1. If the reduced room draft is maintained by controlling room parameters (i.e., redirecting fans, closing doors and windows, etc.), the permittee shall conduct quarterly monitoring of the wind speed and weekly monitoring of the room parameters as specified below:
 - Measure on a quarterly basis the wind speed within six (6) inches above the top of the freeboard area of each vapor degreaser as specified below:
 - Determine the direction of the wind current by slowly rotating a velometer or similar device until the maximum speed is located.
 - Orient a velometer in the direction of the wind current at each of the four corners of the degreaser.
 - Record the reading for each corner.
 - Average the values obtained at each corner and record the average wind speed.
 - Monitor on a weekly basis the room parameters established during the initial compliance test that are used to achieve the reduced room draft.
2. If an enclosure (full or partial) is used to achieve a reduced room draft, the permittee shall conduct monthly monitoring tests of the wind speed within the enclosure, as specified below:
 - Determine the direction of the wind current in the enclosure by slowly rotating a velometer inside the entrance to the enclosure until the maximum speed is located.
 - Record the maximum wind speed.

Each month, the permittee shall perform a visual inspection of the enclosure to determine if it is free of cracks, holes, and other defects.

The vapor degreasers will only emit TCE, a VOC. Due to the fact that no particulate emissions are expected, no visible emissions are expected. Therefore, there is little likelihood that the visible emissions standard will ever be violated. As a result, no periodic monitoring is required for visible emissions from the degreasers.

Recordkeeping

The recordkeeping requirements in Conditions 18 and 19 of the minor NSR permit dated December 11, 2000 meet the requirements of the Halogenated Solvent MACT and have been included in the Title V permit. Because the Halogenated Solvent MACT recordkeeping requirements are met, the recordkeeping meets 40 CFR Part 70 requirements.

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include:

- Owner's manuals, or if not available, written maintenance and operating procedures for each vapor degreaser and control equipment.
- The date of installation for each vapor degreaser and all of its control devices. If the exact date for installation is not known, a letter certifying that the vapor degreaser and its control devices were installed prior to, or on, November 29, 1993, or after November 29, 1993, may be substituted.
- Records of the halogenated HAP solvent content for each solvent used in each vapor degreaser.
- The results of control device monitoring required in Condition III.B.1, Condition III.B.2, Condition III.B.3, and Condition III.B.4.
- Information on actions taken to comply with Condition III.A.9. This information shall include records of written or verbal orders for replacement parts, a description of the repairs made, and additional monitoring conducted to demonstrate that monitored parameters have returned to acceptable levels.
- Estimates of annual solvent consumption for each vapor degreaser, calculated monthly as the sum of each consecutive 12-month period.
- Annual emissions of VOC and Trichloroethylene, calculated monthly as the sum of each consecutive 12 month period.
- The potential to emit, and supporting calculations, for each vapor degreaser as calculated in Condition III.D.2.
- Records as required in Condition III.A.12.

Testing

The permit includes the requirement in Condition 12 of the NSR permit dated December 11, 2000 that the permitted facility be constructed so as to allow for emissions testing at any time using appropriate methods and that test ports are provided at the appropriate locations.

The permit does not require source tests. A table of test methods has been included in the permit if testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

The Halogenated Solvent MACT requires the calculation of the potential to emit for all solvent cleaning machines. This requirement has been included in the Title V permit and is as follows:

- The permittee shall determine their potential to emit from all solvent cleaning operations using the procedures below:
 - Determine the potential to emit for each individual solvent cleaning machine using Equation 1.

$$PTE_i = H_i \times W_i \times SAI_i \dots\dots\dots \text{Equation 1}$$

Where:

- PTE_i = the potential to emit for solvent cleaning machine i (kilograms of solvent per year).
- H_i = hours of operation for solvent cleaning machine i (hours per year)
= 8760 hours per year, unless otherwise restricted by a Federally enforceable requirement
- W_i = the working mode uncontrolled emission rate (kilograms per square meter per hour)
= 1.95 kilograms per square meter per hour for batch vapor cleaning machines
= 1.12 kilograms per square meter per hour for in-line solvent cleaning machines
- SAI_i = solvent/air interface area of solvent cleaning machine i (square meters). 40 CFR 63.461 defines solvent/air interface area for those machines that do not have a solvent/air interface. Cleaning machines that do not have a solvent/air interface shall calculate a solvent/air interface area using the procedure in Condition III.D.2.b.

- Cleaning machines that do not have a solvent/air interface shall calculate a solvent/air interface area using Equation 2.

$$SAI = 2.20 \times (Vol)^{0.6} \dots\dots\dots \text{Equation 2}$$

Where:

- SAI = the solvent/air interface area (square meters)
- Vol = the cleaning capacity of the solvent cleaning machine (cubic meters)

- Sum the PTE_i for all solvent cleaning operations to obtain the total potential to emit for solvent cleaning operations at the facility.

Reporting

The Halogenated Solvent MACT requires that a source submit an annual report stating that the operators are able to pass the test included in the MACT and an estimate of solvent consumption for each vapor degreaser. The MACT also requires a semi-annual exceedance report. The reporting requirements in Conditions 20, 21 and 22 of the minor NSR permit dated December 11, 2000 meet these requirements and have been included in the Title V permit.

The Halogenated Solvent MACT requires that the annual report be submitted by February 1 of each year. In accordance with 40 CFR 63.10 (a)(5), this date can be changed to correspond to due dates established for other reports that cover the same time period. Condition VI.D of the Title V permit requires that an annual compliance certification be submitted by March 1 of each year. Therefore, in accordance with 40 CFR 63.10 (a)(5), the due date for the annual report required in the Halogenated Solvent MACT has been changed to March 1 of each year.

Streamlined Requirements

There are no streamlined requirements for the degreasing equipment operations.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110, that apply to all Federal operating permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

STATE ONLY APPLICABLE REQUIREMENTS

The permittee did not identify any state-only applicable requirements in their application and all requirements in the minor NSR permit are federally enforceable. Therefore, no state-only applicable requirements have been included in the permit.

FUTURE APPLICABLE REQUIREMENTS

The permittee did not identify any future applicable requirements in their application and the staff is unaware of any requirements that they could become subject to during the life of the Title V permit. Therefore, no future applicable requirements have been included in the permit.

INAPPLICABLE REQUIREMENTS

The permittee did not identify any inapplicable requirements in their application. Therefore, no inapplicable requirements have been included in the permit.

COMPLIANCE PLAN

The permittee is currently in compliance with all applicable requirements. No compliance plan was included in the application or in the permit.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Table IV. Insignificant Emission Units.

Emission Unit No.	Emission Unit Description	Citation ¹	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
11	Distillation unit for degreasers (electric)	9 VAC 5-80-720 B	Trichloroethylene	---
12	Tumblers	9 VAC 5-80-720 B	PM-10	---
13	Impact extrusion	9 VAC 5-80-720 B	PM-10, VOC	---
14	Aboveground storage tank for trichloroethylene	9 VAC 5-80-720 B	Trichloroethylene	---
17	Aboveground storage tank for liquid propane	9 VAC 5-80-720 B	VOC	---
18	Maintenance cold cleaner (varsol)	9 VAC 5-80-720 B	VOC, organic HAPs	---
19	Natural gas space heaters	9 VAC 5-80-720 C	---	1.4 MMBtu/hr (total)
20	Portable kerosene heaters (4)	9 VAC 5-80-720 A	---	---
21	Propane-fueled forklift	9 VAC 5-80-720 A	---	---
22	Consolidated Engineering Co. (CEC) natural gas drop-bottom heat treat furnace	9 VAC 5-80-720 C	---	4 MMBtu/hr
23	CEC natural gas age oven #1	9 VAC 5-80-720 C	---	1.6 MMBtu/hr
24	CEC natural gas age oven #2	9 VAC 5-80-720 C	---	1.6 MMBtu/hr
25	Natural gas water heater	9 VAC 5-80-720 C	---	0.6 MMBtu/hr
26	Natural gas water heater	9 VAC 5-80-720 C	---	0.6 MMBtu/hr
27	Propane water heater for aqueous washer	9 VAC 5-80-720 B	Criteria pollutants, HAPs	---

¹The citation criteria for insignificant activities are as follows:

- 9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
- 9 VAC 5-80-720 B - Insignificant due to emission levels
- 9 VAC 5-80-720 C - Insignificant due to size or production rate

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. Therefore, all portions of the Title V renewal application are suitable for public review.

PUBLIC PARTICIPATION

A public notice regarding the draft permit was placed in the News-Virginian, Waynesboro, Virginia, on October 18, 2005, announcing a 30-day public comment period. EPA was sent a copy of the draft permit and notified of the public notice on October 18, 2005, and concurrently reviewed the draft permit as a proposed permit. West Virginia was sent a copy of the public notice in a letter dated October 18, 2005. All persons on the Title V mailing list were also sent a copy of the public notice in a letter dated October 18, 2005.

Public comments were accepted from October 18, 2005 to November 17, 2005. No comments were received from the public or the affected state regarding the draft permit. EPA's comment period ended on December 2, 2005. No comments were received from EPA.

ATTACHMENTS

- Attachment A - 2004 Annual Emissions Update
- Attachment B - December 11, 2000 Minor NSR Permit

Attachment A

2004 Annual Emissions Update

Attachment B

December 11, 2000 Minor NSR Permit